

CLAIMS

We claim:

1. (Currently amended) A metal nozzle boss for high-pressure composite vessels, said metal nozzle boss for use with a plastic liner of high-pressure composite vessels, said metal nozzle boss comprising:

a cylindrical nozzle head part having a vertical through hole and an internal thread formed on an upper portion of an inner circumferential surface of said vertical through hole;

a disc-shaped nozzle blade part protruding outwards around an outside edge of a lower end of the nozzle head part, the nozzle blade part having an upper sloping surface and a lower sloping surface respectively provided on an upper surface and a lower surface of the nozzle blade part;

a seal ring mounting part depressed into a lower surface of a multi-stepped support rim which protrudes upwards and outwards from an outer circumferential surface of the nozzle head part at a position below the lower sloping surface;

a sealing device extending downwards from said seal ring mounting part and having both an external tightening thread formed around a lower portion of an outer circumferential surface of said sealing device and a tightening land formed between an upper end of said external tightening thread and said seal ring mounting part, said tightening land having a diameter equal to a diameter of a root of said external tightening thread;

a tubular tightening piece having an internal tightening thread and engaging with said external tightening thread such that an upper surface of the tightening piece comes into contact with an inner surface of said plastic liner, with a depressed seal ring seat provided on said upper surface of the tightening piece at a position corresponding to a junction with said plastic liner; and

Substitute Copy

a seal ring seated in the seal ring seat of the tightening piece such that a lower surface of said seal ring comes into close contact with the seat, a first surface thereof coming into close contact with said seal ring mounting part, a second surface thereof coming into contact with the plastic liner.

2. (Currently amended) The metal nozzle boss for high-pressure composite vessels according to claim 1, wherein each of said upper sloping surface and said lower sloping surface is provided with a locking groove having a dovetail cross-section, with a plurality of locking ridges formed on an inclined surface of the locking groove.

3. (Currently amended) The metal nozzle boss for high-pressure composite vessels according to claim 1, wherein said seal ring has a circular or polygonal cross-section and is comprised of rubber, silicone or soft plastic.